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# CACTUS AND SUCCULENT JOURNAL

**Of the Cactus And Succulent Society  
Of America**

Vol. III

NOVEMBER, 1931

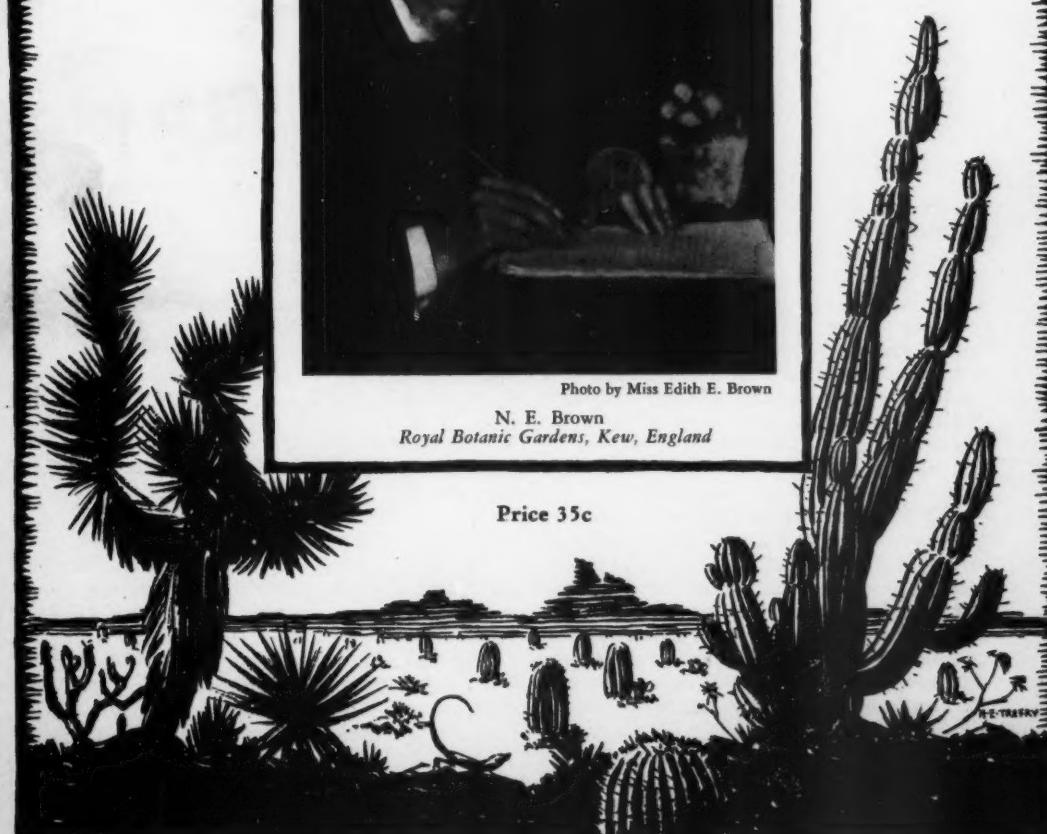
No. 5



Photo by Miss Edith E. Brown

N. E. Brown  
*Royal Botanic Gardens, Kew, England*

Price 35c



## CACTUS AND SUCCULENT JOURNAL

Published and Owned by

THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

A monthly magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this journal for purposes of identification. (Membership and subscription \$3.00 per year, foreign \$3.50.) Mail membership application and subscription to the Secretary, Mr. W. M. Ketteringham, 610 West 65th Street, Los Angeles, Calif.

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## N. E. Brown

By JAMES WEST

We are happy to present to our readers the portrait adorning our cover this month. Not since the long-ago days of Haworth has there existed in England a figure approaching in importance in the botany of succulent plants that of N. E. Brown of Kew.

It is a figure almost legendary, for at a time when the members of our editorial staff were yet unborn, scientific papers under his name were already in print; and for well over half a century his contributions to the botany, particularly of the African succulents, *Euphorbias*, *Mesembryanthemums* and *Stapeliae* have continued. Almost without number are the genera and species bearing the well-known initials N. E. Br.

Now, an octogenarian, but with unabated vigor of mind, Mr. Brown is in the midst of what is likely to stand as his most important work, the revision of the difficult Mesembrioids. What Haworth envisioned, but could not find, a basis for the division into genera of that great and unwieldy group, was successfully established by him, and is now well on the way to completion, a work on which all future

treatments will have to be based.

We all know him as a botanist, but not all of us are aware of his being a horticulturist as well. Knowledge, skill and love have enabled him to grow, in moisture-laden England, an unrivalled collection of *Conophytums*. Those who have attempted that genus, difficult enough in sunny California, know what that means.

We of the JOURNAL are fortunate in having had Mr. Brown's help and interest almost from the start. We look upon him not only as a most valued contributor, but in many ways as a guiding spirit in our endeavors. Those of us who have had the privilege of corresponding with him know that he is not alone an eminent botanist, but a kindly and lovable human being, with the most cheerful willingness to help enquirers in their difficulties by charming personal letters, while he finds time—we do not know how—to write in the press of important scientific work.

We hope, nay expect, him to be with us for many more years, at least until he has rounded out his century of useful work.

## Fishy, or Mesembs again

By N. E. BROWN

Surely no other group of plants has so many or such varied points of interest connected with it as are found among Mesembs, for they seem unending.

Here is another of the peculiarities found among this group. One day there came to me from Mrs. van der Bijl some branches from the type plant of a Mesemb named *Ruschia acuminata* L. Bolus. These possessed a very strong fishy odor that interested me greatly. Of these I sent two or three cuttings to a lady who is much interested in these plants and wrote informing her that I had done so. The postman duly arrived, carefully carrying the parcel containing the cuttings separately from the letters, and informed my friend that some fish had been sent to her that did not seem too fresh and that he had carried the parcel separately in case it should make the letters smell fishy. He was incredulous when told that it did not contain fish but a plant. "Plant, that's no plant, it's fish, or if it is a plant it's not British." To convince him the parcel was opened and the cuttings shown to him. They were planted and placed on the top shelf of a greenhouse. Then the cat came on the scene, nosed the odour of fish and quickly climbed to that top shelf to investigate, whence it was speedily removed, although I am doubtful if the cat would really have bitten the plant. However, its climb to get at the plant confirms the fact that the latter

plant has been cultivated for some time, unless it is bruised, when the odour is quite strong. Seedlings I raised of the plant also had no perceptible odour of fish until bruised. When visit-



Photo by James West.

Seedling plant ( $\times 2$ ) of  
*Mesembryanthemum piscodorum* (L. Bol.) N. E. Br.  
(*Ruschia acuminata* L. Bol.)



Photo by James West.

Expanded capsule of *Mesembryanthemum piscodorum* (L. Bol.) N. E. Br. (*Ruschia acuminata* L. Bol.)  $\times 3$

has a strong odour of fish, an odour that is very unusual in the plant world, although I have another and totally different species of *Mesembryanthemum* in cultivation that, as I write, is causing my greenhouse to smell nice and fishy! This fishy odour seems to disappear after the

ing my friend I placed a bruised leaf on the floor. Pussy soon nosed and found it, but I noticed it did not attempt to bite it.

This same cat deserves a paragraph to itself. It is a Siamese cat of an inquiring turn of mind and distinct individuality. It is very fond of its mistress, but does not approve of her lavishing so much of her time upon Mesembs so it has been found to have stolen the labels out of the pots and to have hidden them under mats, etc. Snails being very abundant and troublesome this year, Pussy observed its mistress collecting them for destruction, so conceived the idea of helping by collecting them off a wall. It obtained several, but then one of the snails thrust out its horns. This was too much for the cat so

it gave a growl and would have no more to do with snails and left them severely alone. It appears also to know what is said to it, for a visitor stooping down told the cat it was "a horrid little creature" and immediately received a smack in the face from the cat, who did not use its claws, but left the room growling.

But to return to the Mesemb, I have noticed that the fishy odour is stronger in the evening than in the daytime, but of what service it is to the plant I am quite ignorant and can only suggest it may act as a defense against browsing animals.

The description of *Ruschia acuminata* L. Bolus, makes no mention of the fishy odour, but this odour is mentioned under the previously described *Ruschia piscodora* L. Bolus, which comes from the same region and in my opinion is identical with *R. acuminata*, especially as the pieces sent to me were stated to be from the same plant as the specimens described by Mrs. Bolus. From other material subsequently received I find that some plants have scarcely any odour while others are strongly scented and the surface varies from minutely rough to smooth. I therefore think that *R. acuminata* must stand as a synonym of *R. piscodora*.

With reference to the generic name *Ruschia*, it may be well to here make clear that it has no claim to recognition, as it is founded upon the identical characters possessed by *Mesembryanthemum umbellatum*, Linn., which is the species selected by myself as representing the type of the genus *Mesembryanthemum* when I emended its characters in 1925. But at that time I associated with it other species that have since been generically separated, which differed from *M. umbellatum* in the absence of a placental tubercle and the presence of marginal wings to the expanding keels of the fruit. I at first placed these all together, because I found these characters to vary in some otherwise closely allied species, and in one case the tubercle is present or absent in the same species. I therefore entered all these various characters under *Mesembryanthemum* in two parts of my original Key. As my work progressed and I found it necessary to form and include new genera, the Key had to be copied and recopied several times, and in doing this it unfortunately happened in one of the copyings I quite omitted to copy the characters relating to the typical species of *Mesembryanthemum*, which were well known to me, and only included those of the other species associated with it, and the omission was never noticed. So that it happens that the possession of a placental tubercle by the fruit is

omitted from among the characters of the genus mentioned in Phillips, *Genera of S. Afr. Fl. Plants*, P. 241. And as the Key in that book formed the basis of the more enlarged Key published in the *Gardeners' Chronicle*, 1925, Vol. 78, P. 433, the same characters were omitted from that also and the error remained unnoticed long afterward. Discovering this omission, Dr. Schwantes, eager to avail himself of the obvious error, entirely ignored my statement that *M. umbellatum* formed the type of the emended genus, and founded the genus *Ruschia* upon the identical characters possessed by *M. umbellatum*, placing that species under *Ruschia*. Having distinctly stated that I chose *M. umbellatum* as the type of the genus, that species must be retained as such, in spite of the faulty description, which could easily have been corrected by the addition of the words "with or without" placental tubercles or membranous wings to the expanding-keels. My faulty description arose from unintentional omission in copying my Key, but there exist many old descriptions of genera and species that are far more inaccurate (*Bobartia*, for example) yet no one rejects the plant mentioned as being the type of the genus on that account. Therefore, *M. umbellatum* must remain as the type of the genus *Mesembryanthemum* Linn. and *Ruschia* be placed as a synonym of that genus, so that the name of the fishy species above mentioned will be *M. piscodorum* N. E. Br. (Syn. *Ruschia piscodora* L. Bol. and *R. acuminata* L. Bol.).

NOTE: The material for the accompanying illustrations was received from Mrs. van der Bijl under the name of *Ruschia acuminata*, and is presumably identical with the plant referred to by Mr. Brown. The seedling pictured is about five months old, greenhouse-grown. As soon as I read Mr. Brown's interesting observations, I investigated my seedlings (hitherto, I must confess, regarded as belonging to the category of "just another Mesemb"), with the result that I did indeed discover a faint but unmistakable fishiness emanating from the bruised leaves. Readers interested in the taxonomy of the Mesembriaceae may find Dr. Schwantes' viewpoint expounded in *Zeitschrift fuer Sukkulenkunde* III, 2, (1927) pp. 26-28. Dinter mentions a "penetrating odor of herring" as characteristic of several South West African *Mesembryanthemums* of section *Uncinata* Salm, among them *M. rupicolum* Engl. and *M. vulvaria* Dtr. (*Neue & Wenigbekannte Pflanzen S.-W.-A.*, p. 45).

—JAMES WEST.

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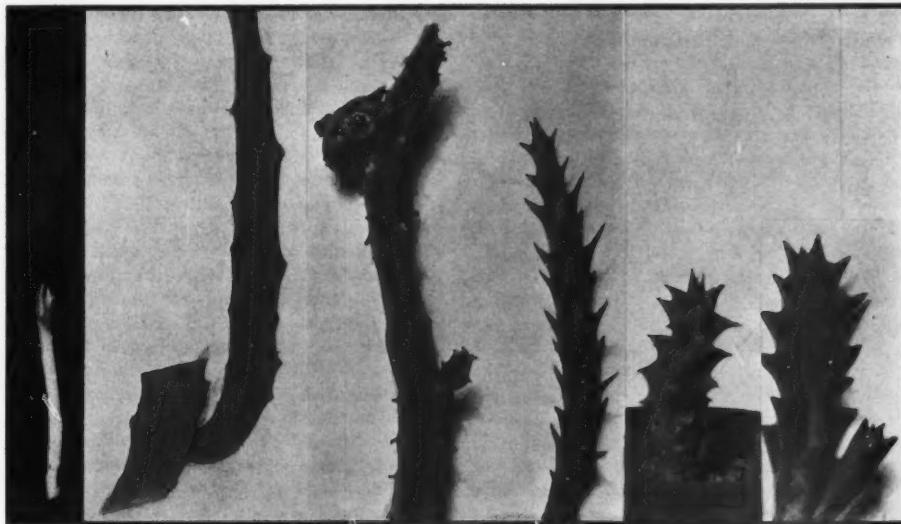


Photo by Boyd L. Sloane

Fig. 9: Stems of *Carallumas*; 1. Round, underground stem of *C. europaea*; 2. *C. attenuata* Wight from Wight's *Icones Plantarum Ind.*, an Indian species; 3. *C. europaea*; 4. *C. Sprengeri*; 5. *C. armata*; 6. *C. Leendertziae*.

## The Stapelieae

### 3. *Caralluma*

By ALAIN WHITE and BOYD L. SLOANE

There is an amusing passage in one of Professor Dinter's books, where he decides to assign a new species of the STAPELIEAE, of whose exact status he is uncertain, to the genus *Caralluma*. By way of explanation he says it is a genus "to which everything has already been assigned for which a place could not be found elsewhere."

Dinter's statement may be an exaggeration, but it suggests the wide variety of forms to be expected in a genus occupying so extended a geographical distribution. *Caralluma* has not less than a dozen species in India, more than a dozen in Arabia and some two dozen at the Cape, with lesser representation in practically every dry or semi-arid region of both Tropical and Southern Africa. There is a single species in the Canary Islands, with two in Ceylon and two in Southern Spain.

*Caralluma*'s total of about ninety species is by far the largest for any genus of the STAPELIEAE. It is approached only by *Stapelia*, though the latter has so many natural varieties and so many hybrids, and they are so generously represented in collections, that sometimes *Caralluma* seems

anything but the dominant member of the tribe.

The varied forms of the *Carallumas* seem often to defy exact definition, and to this day there are a few species about which the authorities are not in complete accord. But these fine distinctions need cause us no concern, for the species to be seen in this country present no serious problems. Our difficulties will come rather from paucity of materials than from their excess. Of the ninety species, we have less than a dozen that have been satisfactorily identified and only seven have been seen in flower.

But even with our few specimens, we can form some conception of the genus, for it has surprising individuality and constitutes a natural starting point for the study of the whole tribe. The varied flower structure suggests now one, now another of the different genera, so that in considering the *Carallumas* as a whole one must think in terms of these changing relationships and not in terms of more fixed characteristics, as one would in considering the other genera, *Huernia* or *Duvalia* for instance, or even the *Stapelias*.

First we should speak of the stems, which, while less important than the flowers, are also extremely interesting and varied. We have already suggested that the ancestors of the STAPELIEAE may have been round-stemmed, and to this day when a species develops underground runners, as *Carallumas* and *Duvalias* in particular often do, they are usually cylindrical, though otherwise fully developed, even to having little rudimentary leaves. There is one species in India, the "edible Caralluma", *C. edulis* Benth. et Hook fil., which retains an almost circular stem; while our Fig. 9 illustrates an underground stem of the "European Caralluma", *C. europaea* N. E. Br. When the stems come out into the light, the geometry of succulence asserts itself and the ribs and angles appear to which we are accustomed. Fig. 10 shows two views of a stem of the "fleshy Caralluma", *C. carnosa* Stent, the first taken just after it was brought to the light, and the second after it had been above ground for six weeks. Such adaptation is always rapid.

The remaining Indian *Carallumas* and some of those from Arabia have slender square stems, tall, slightly tapering and irregularly branched. None of these are known in our collections.

In Africa succulence becomes more prominent. Four angled stems still predominate, though some of the species have five and six ribs. In northern Africa we find the rugged, irregular, four sided stems of *C. europaea*, which always

arouses interest because it is one of the only two species to be found also in Europe. Another species of this type, with extremely irregular stems, sometimes like an exaggeration of *C. europaea*, is "Burchard's Caralluma," *C. Burchardii* N. E. Br., which was discovered by Dr. O. Burchard in 1912 in the Canary Islands.

More strongly toothed species soon appear, such as "Sprenger's Caralluma", *C. Sprengeri* N. E. Br., of the Sudan, with slender, four-ribbed stems, mottled in the sun, and very prominent teeth. It is a vigorous grower, and should become a general favorite. Hitherto it has not flowered in the California climate, and collectors may find an interest in trying to make it do so by experimenting with different methods of culture.

Other species have the teeth in irregular rows. *C. mammillaris* N. E. Br., from the Karroo Desert, is a striking example, with its five or six irregular, often spiral ribs. It has been known to collectors for a hundred and sixty years and is the only member of the genus *Caralluma* as now known to figure in the Mantissa Plantarum of Linnaeus (1767-1771). The plant in Fig. 11 is from the very fine Stapelia collection of Mrs. Helen McCabe in San Diego.

Another very strongly toothed species is the "armored Caralluma," *C. armata* N. E. Br., from Little Namaqualand. This is the *Caralluma* recently transferred by Prof. Dinter to his new genus, *Sarcophagophilus*, of which we

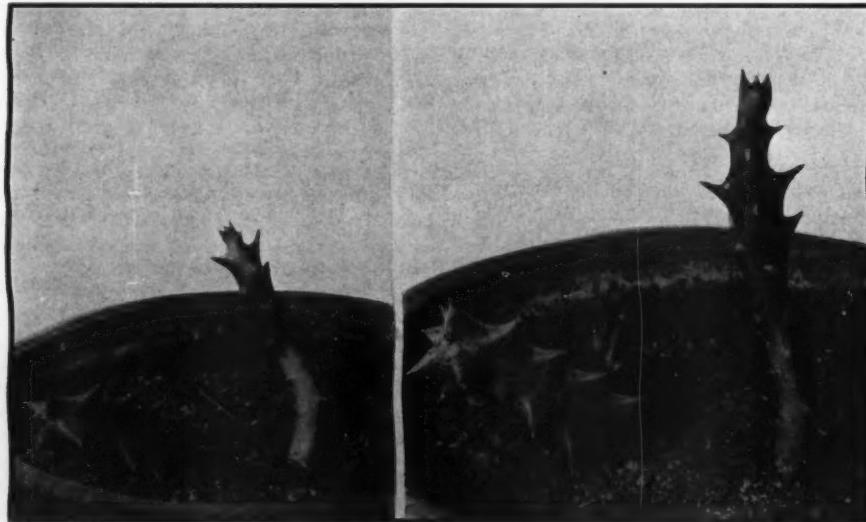


Photo by Boyd L. Sloane

Fig. 10: *Caralluma carnosa*, showing development of underground stem.

spoke last month, the second species being the very similar "Winkler's Sarcophagophilus," *S. Winkleri* Dtr., from South West Africa. The seedling in Fig. 9 is one of the many little *Carallumas* being grown from South Africa seed by the Soldena Gardens in Pasadena.

*Caralluma* stems of the final type come largely from the Transvaal, South West Africa and the Cape. They are low, markedly succulent, four-ribbed species, with regular ribs toothed at considerable intervals. They include the "yellow *Caralluma*", *C. lutea* N. E. Br.; "Miss Leendertz's *Caralluma*", *C. Leendertziae* Stent; *C. carnosae*; and "N. E. Brown's *Caralluma*", *C. Nebrownii* Dtr. and Brgr. The stems in this group, which shade from very light to very dark green and take on marblings of red from exposure to sunlight, are sometimes very beautiful. *C. lutea* has the longest stems, and it is a help in recognizing them as well as those of *C. Leendertziae* and *C. Nebrownii* to notice that the teeth bear two little side stipules after the fashion of the *Duvalias*.

The appearance and structure of the *Caralluma* flowers vary as much as the stems. In the Indian and some of the African species the flowers are single and irregularly distributed along the stems. The "Aus *Caralluma*", *C. ausana* Dtr., with its tiny single yellow flowers, is an example of this kind of inflorescence. It was named by Dinter after the region of "Aus and Gubub" in the southerly part of South West Africa where he tells us he found it "here and there in very large cushions."

It was first introduced to this country by Mr. W. I. Beecroft, of Escondido, owner of the largest American collection of the STAPELIEAE, to whom we also owe the importation of several of the other *Carallumas*.

In *C. carnosae* the flowers are single or in groups of not more than three. They are very small, fleshy and bell-shaped, pale pinkish grey outside and spotted with a dark purplish red within. This plant has flowered recently in New York but none of the plants in California have yet flowered, and the species offers another challenge to the ingenuity of our amateurs.

In a majority of the African *Carallumas* the flowers are borne in more or less regular clusters, formed sometimes of only three or four flowers, as in *C. Leendertziae*, and sometimes of nearly a hundred, as in the giant *C. retrospicciens* N. E. Br., of Nubia, a species unfortunately not hitherto grown successfully in cultivation.

The colors of the *Carallumas* are principally shades of yellow, brown or purple, in many combinations. The corolla lobes are of many



McCabe Photo

Fig. 11: *Caralluma mammillaris*

shapes, from the obtuse angled forms of *C. europaea* to the long and slender points of *C. lutea*.

The corona forms are very important, because they establish relationships with other genera as widely divergent as *Ecbidnopsis* and *Stapelia*. It is difficult to study these coronas, because available material is so scanty, but whenever possible it is worth the effort as an introduction to the flower structure of the other genera, where specimens will be much more plentiful.

The inner corona of the *Carallumas* is relatively constant, the five lobes bending forward over the central crown and almost meeting above the anthers. In some species the lobes continue upwards in various curves.

(Continued in December JOURNAL)

NOTE: Mr. George Hume of West Bridgford, Nottingham, England, has sent us information as to the existence of an additional genus of the Stapelieae: *Stapeliopsis* Pillans. This is a monotypic genus, established by Mr. Pillans in 1928, and it is closely related to the genus *Stapelia*, from which it differs principally in the remarkable form of the outer corona.

## New Species?

By J. P. HESTER

In 1930 I discovered in the Big Bend country near Alpine, Texas, what may be a new cactus, probably a *Coryphantha*.

The large, fleshy roots, the grooved tubercles, and the small pinkish or reddish-purple flowers set it apart from anything I have been able to discover in Britton & Rose. The nearest thing to it seems to be *Coryphantha nickelsae*, which flourishes in Mexico several hundred miles away.

In Nature these little plants are difficult to discover unless one visits their haunts in June when their small, starlike flowers reveal their hiding places.

I found them in two places about two miles apart, so they must be scattered over several square miles of mountain terrain.

They are never found except on or near the crest of level or gently-sloping limestone ridges, presumably because the plants are so small that those taking root lower on the slopes are covered and killed by detritus after heavy rains.

They grow about 5000 feet above sea level, in a country that has some snow in winter and enough rain the rest of the season to produce luxuriant grass and scrub oak timber.

Plants globose, 1 inch to 1½ inches high and about the same in diameter, usually solitary, but in favorable places, in cespitose masses 12 inches in diameter or less; roots large and fleshy, often 2 to 3 times as long as the parts above ground.

The plants are covered with a mass of cleft tubercles ¼ to ⅓ inches long, staggered and arranged in five spiral rows one way, and eight rows the other. New growth tubercles are arranged in 3 and 5 rows and are glaucous, light green, and tender, turning tough and dark green with age.

Old tubercles are crowned with from 14 to 20, usually about 16, whitish, semi-translucent, acicular spines, 3/16 to ⅛ inches long, all radials, barely tipped with brown, arranged like the spokes in an old-fashioned wheel, with a few forming a small fascicle near the top of the groove which is on the upper side and extends almost to the base of the tubercle and in which is more or less white wool or down.

The whitish, felted areoles are circular and about ⅛ to 3/16 inches in diameter.

The pinkish or reddish-purple flowers appear in June and are from ½ to ¾ inches across. The inner perianth-segments are lanceo-

late, apiculate to obtuse; the greenish-white filaments crowned with yellow anthers, are of various lengths and seem plastered or stuck to



Approx. ¾ size.

Photo by John Wright.

the inner cup until touched, when they immediately arise and close around the exserted, greenish-white style, with its five pinkish stigmas lobes.

As these plants were found before I knew much about cacti, I do not know whether the flowers spring from new growth or old, but presumably from the latter as new growth springs from old tubercles below the ground line and, at times, from the slot in old tubercles above ground.

As most of these plants grow in crevices between rocks, there is seldom room for more than one stem in a place, but I did find two cespitose masses, the largest of which is here in Arizona. These will be forwarded to Mrs. John D. Wright, of Santa Barbara, Cal., who now has under observation the two plants here depicted. It may not be possible to give this little cactus its proper place among its relatives until it flowers and fruits again, which it failed to do this season.

### BRITTON AND ROSE REPRINT

Vol. I, (3rd Installment)

The following 8 pages are reprinted from "The Cactaceae" through the courtesy of Carnegie Institution of Washington, D. C. Vol. I was published in 1919 and is the recognized authority on Cacti. The demand for this rare volume is so great that the CACTUS JOURNAL is reprinting so that it is available to the cactus world.

## Notes on Britton & Rose

### Reprint of Vol. I

#### PERESKIA AMAPOLA Weber

This species has been combined with *Pereskia saccharosa* by Britton and Rose, but by many it is considered as distinct. There is a definite difference in the shape and texture of the leaves, those of *Pereskia amapola* being thicker, wider, and with its veins not reuniting as in *Pereskia saccharosa*.

Mrs. John D. Wright has observed that there is a difference "in the shape of the petals: In *saccharosa* they are oblanceolate; in *amapola* they are very definitely retuse, with a tiny weak spicule in the center of the indentation."

On pages 83-87 of the 1904 volume of the "Monatschrift für Kakteenkunde" Weingard devotes that space to a description of *Pereskia amapola*. We are inclined to accept it as a species but will wait for further material that is being prepared before doing so.

*Pereskia argentea*, also listed as a synonym of *Pereskia saccharosa*, has characteristics of flower and leaves even more widely differentiated.

Plants of all three species have been studied

in the gardens of both Dr. A. D. Houghton at San Fernando and Mrs. John D. Wright at Santa Barbara.



Photo by James West  
*Pereskia amapola* in flower in the gardens  
of Mrs. John D. Wright.

## California Cacti

### *Sclerocactus polyancistrus*-Pineapple Cactus

By E. M. BAXTER

Probably the prettiest of all our native cactus is this one with its sinuous red and white spines; the red ones rounded and hooked, the white angled and straight. The plant itself is round, sometimes a little longer than wide, shaped like a pineapple; it has about thirteen ribs and spaced along these are the areoles with three sets of spines, the longest four inches long.

Around the edge of the areole are a set of eight to twelve short white spines, set at right angles to the surface. In the bottom half of the areole is a set of red to maroon colored long hooked spines, one of them in the center, with seven others, equally long, in a circle around it and standing at about a 45° angle from the surface of the areole. Lastly there are the white spines, curved and twisted, coming from above the set of red ones but still in the lower part of the areole. These white spines are not hooked,

their tips are dark red. Only two or three of them are as long as the red spines, and the total number of long and short ones varies greatly.

This genus (*Sclerocactus*) was formerly included with the Barrel Cactus in the genus *Echinocactus*. There are two species in the genus, *polyancistrus* and *whipplei*, both found in the far Southwest. *Sclerocactus whipplei* has not been found in California. There is a form of *Sclerocactus polyancistrus* with nearly all white spines, but I believe it to be just a form and not distinct enough to be given separate classification. I have found small seedlings of the white form in company with red spined seedlings, growing under the dead armament of the typical form.

Our species is found in small colonies in widely separated parts of the south. Specimens have been taken from Red Rock Canyon, from

Approximately  $\times .25$ , Photo by E. M. Baxter

*Sclerocactus polyancistrus* growing on top of a dry ridge at Helendale, Calif.

near Helendale and Adelanto, from the Arizona State border, and from points between these three. It occurs also in Nevada and Utah.

It is attacked by an insect whose grub bores into the plant from below. In nature the plant does not suffer severely from this, but when transplanted to the garden a rot enters through the insect's boring and destroys the plant in a very short time. Several methods of removing the borer and of stopping the rot have been unsuccessful, so that a good specimen is still rarely found. Utah plants seem to grow larger and more healthily and withstand the transplanting better than our native ones.

A person who has had the good fortune to come across one of these beauties growing on the desert would not want to remove it, though. It compares with the finding of a lily in a swamp, or more properly—of a rose in the thicket. Because of its rareness most of us want to bring the plant home where it may be seen by others instead of being left to mature and die alone in the wastes. Our paternalism is leading to extinction of the species, however,

because garden specimens do not live and prosper.

The flowers are magenta, often three inches long, and come from the top of the plant. The fruit is red, long, and nearly smooth.

*Sclerocactus polyancistrus* (Engelm. & Bigel.)  
Britt. & Rose, Cactaceae 3:213. pl. 23.  
1922.

Plant body globular to oblong, (10 to 40 cm.) 4 to 16 inches high; simple; with 13 ribs. Areoles  $\frac{3}{4}$  to 1 inch (2 to 3 cm.) apart, filled with short wool and spines. Spines in three series: radial spines short,  $\frac{1}{2}$  inch (1.25 cm.) long, 8 to 12, white; hooked spines, red to maroon, from bottom half of areole, 8, with one central but not different, to 4 inches (10 cm.) long; white spines, coming from above the red, straight or twisted, not hooked, to 4 inches (10 cm.) long, 2 to many but only 1 or 2 as long as the maximum. Flowers magenta, 3 inches (7.5 cm.) long, style glabrous; fruit pyriform,  $1\frac{1}{2}$  inch (4 cm.) long, red, nearly naked, scales bearing short wool in their axils.

## We Capture a Cactus

By GEORGE LOGAN PRICE

In Tecate is a tequila of particular potency. Midway between Tecate and Agua Caliente, on the Mexican side of the border, is a cactus whose exact like we never have seen in any store or cactus garden.

We first made its discovery several years ago, when, after a night in the primitive but chaste domicile of Conchita, who has a cabin back of the cantina of Jose the Basque in Tecate, (the night also was chaste, be it known, for Conchita is buxom, and forty, with a husband in the army, and two fine little sons) we set out, as was our wont, for the next drouth relief station at Tia Juana. (That was before the time of Agua Caliente.)

'Tis thirty miles of dusty, rigorous riding, over a trail called road by courtesy. From Tecate to Tia Juana not a habitation, nor, during the heat of the day, an evidence of human life. But there, in the desert along the roadside, was a gorgeous cactus, or a whole family of cacti, perhaps, which was company enough for any man.

Heads, or whatever the scientific name may chance to be, about the size and shape of a full-grown pine-apple, deeply and regularly ridged in vertical serrations . . . richest of lush, ripe green, with horny, flat, broad, cross-barred spines of coral color, set star-fish fashion all along the ridges. A dozen or more, growing from a common root . . . a pulchritudinous punctuation mark in a drear page of ashy grey.

We kicked one of the pineapples, and it came away with some of the parent stem or root stock. Tenderly we carried it home, planted it in an open-work basket of majolica, and from the first day it thrived. For three years we enjoyed its beauty, and then we decided to have one like it for our office.

Tecate was especially gay that night . . . the tequila was particularly potent, but next morning, en route to Caliente, there was that same marvelous cluster of cacti, gorgeous as ever. This time we did not restrain ourselves. Choosing carefully, not to mar the symmetry of the composition, we selected three glorious heads, punctured a pair of practically new shoes, and a pair of feet many years past newness, ruined a pair of gloves and as many hands in selecting one or two other harmless specimens, and went on our way rejoicing. At Agua Caliente we rejoiced a bit more . . . and at the Foreign Club there was an encore or two. Then, in good order, we retreated toward the border.

Our cactus collection was in clear view in the tonneau of the car when we stopped at the line for inspection. With a superlative superciliousness the agricultural gentleman there lifted them out, and dumped them, brutally on the ground. He did not even deign to explain, and all the succulence of Tecate, Agua Caliente and Tia Juana rose in our gorge in protest. To no avail. We were haughtily waved on. Prickling feet and fingers, the price of all that confiscated treasure trove, prickled with double intensity as we stepped on the gas. And then more guards. One guard, in particular . . . very young, very important. Let's see you walk. We walked, lumbly, on sore feet. Not so good. Try it again. We tried again. Then the guard called a couple of superiors, and we were invited to do it over again. We are sure it was not the tequila which exploded then. It

was the spirit of the true cacti connoisseur which erupted all over that place in what afterwards was reported to be the most spectacular exhibition of vinegar vernacular ever heard on the border.

It is, we believe, the bum's rush, they call it. At least, it was swift, smooth, effective. We were wafted rather than impelled through a door, down a corridor, through another door. Something clanked, in the best Count of Monte Christo manner. We were behind the bars. And behind the bars we remained the rest of that afternoon. From time to time we received company. Bibulous, garrulous gentlemen. Some of them were enthusiastically and most entirely sick. We protested, then we raved. We spoke of influential friends here and there, and the Inspector consoled us by remarking that we'd be surprised to know what important men had sojourned behind these same bars.

Came the dusk. The border closed. A dark, and also barred, covered wagon backed up to the bastile. No . . . we did not spend the night in jail. A professional bondsman (and we never expected to see one in the guise of an angel) bought us our night's freedom. And the next morning the judge said "\$25!" in a voice so final that we did not debate the issue.

Wild cacti, caught in their native habitat, have lost their lure for us. We take ours tame, now, from dealers. They may lack something in originality, but at least you may carry them home in plain sight.

### EXCHANGES

Conducted by Mrs. W. M. KETTERINGHAM

610 West 65th Street, Los Angeles

Please enclose a self-addressed stamped envelope.

#### Exchanges Offered

Want good stock of *Aloe variegata*, (any size) or seedlings of any of the following: *Pachycereus marginatus*, *Cephalocereus senilis*, *Astrophytum myriostigma*, *Euphorbia obesa*, *Echinocactus grusonii*. Also wish to obtain *Euphorbia obesa* seed and *Cephalocereus senilis* seed in exchange for *Cephalocereus deeringii*, one to twelve feet, (also seeds), *Hylocereus triangularis*, one to thirty feet, *Acanthocereus pentagonus*, any size from one foot up, *Cereus giganteus*, one to four feet, (also seeds). Also have seeds of *C. peruvianus*.

Want good specimens of California and Arizona cacti in exchange for South Texas cacti, either in quantity or choice specimens. Can furnish *Opuntia leptocaulis*, *O. aciculata*, *O. lindheimeri*, *O. macrorhiza*, several unidentified cultivated opuntias, and *Nopalea cochinchinifera*. *Echinocereus dubius*, *E. fitchii*, *E. pentalophus*, *E. papillosus*. *Homalocephalotexensis*, *Hamatocactus setispinus*, *Dolichothele sphaerica*, *Coryphantha runyonii*, *Thelocactus bicolor*, *Escobaria runyonii*, *Ferocactus hamatocanthus*, *Wilocoxia poselgeri*, *Ancistrocactus scheerii*, *Astrophytum asterias*, *Lophophora williamsii*, and *Harrisia martinii*.

Have for exchange *Aloe eru*, var. *maculata*, several *mesembryanthemums*, *Echeveria weinbergii*, *Kleinia mandraliscoe*, a number of *Crassulas*, several *Stapelia*s, *Sedum praealtum cristatum*, *S. padphyllum*, and *Portulacaria afra*.



## Rare *Utahia sileri* Engelmann Rediscovered by John S. Wright

A most interesting rediscovery of a rare and long-lost cactus occurred when John S. Wright, the son of Mrs. John D. Wright of Santa Barbara, found specimens of *Utahia sileri* in the region of Cottonwood Springs and Pipe Springs in southern Utah.

Following the discovery of the plants by young Mr. Wright, Mr. M. D. Kapp of Summerland, California, followed in his footsteps and found Mr. Hinton Siler, son of the original Siler for whom the plant was named, who took Mr. Kapp to the spot where father and son had gathered a number of these plants for Haage and Schmidt. Additional specimens were found by Mr. Kapp, some with the dried flowers still attached, showing that they do not grow from the axils, as do those of a *Coryphantha* which *Utahia* resembles, but from the areole itself.

These dried flowers were soaked in hot water and found to be yellow in color and of the shape and size described by Britton and Rose. There is additional corroboration of the authenticity of this plant in the statement of a Mr. Brown, who at the time of the original discovery was twelve years old, and claims that many times he had gathered this plant for Mr. Siler, Sr.

*Utahia sileri*, which is a monotypic genus, is listed by Britton and Rose as being rare, and furthermore it is known only to them from the type specimen which is preserved in the herbarium of the Missouri Botanical Garden. Flowers of other plants have been erroneously identified as of this species, but as far as they are aware the plant is known only from the type specimen.

The description of Schumann in Gesamt-beschr. Kakteen is as follows:

*Echinocactus sileri* (Engelmann).

Body single, globose or a little depressed; rounded at apex; white woolly at apex overtopped by countless interwoven black and white spines. (Schuman's) spec. is 10 cm. diam., 13 to 16 ribs almost divided into nearly rhomboid tubercles 1.5 cm. high; areoles 1 to 1.5 cm. apart; very large orbicular, 8 mm. diam.; they are extended far beyond the spine-bundles and clothed with an abundant, somewhat floccose, white, rather persistent, woolly felt; radials 13 to 15, spreading, awl-shaped, stout, straight or a little curved; upper pair longest, to 2 cm., white; the stoutest brown-tipped, centrals 3 to 4; the uppermost curved upwards, to 3 cm. long, even stouter, blackish-brown, lighter at base; lower one pointing straight forward, or almost so.

Flowers are straw-colored, only 2.5 cm. long.

Distribution: Utah near Cottonwood and Pipe Springs.

Coulter, John M.—Preliminary revision of the North American Species of *Echinocactus*, *Cereus*, and *Opuntia*.

Contr. U. S. Nat. Herb. 3: 355-462. 1896.

(In this paper *Echinocactus sileri* Engelm. is described by Coulter on page 376 as the first species with the following characterization in the key:—)

"... *Tubercles distinct* (as in *Cactus*): flowers yellowish or whitish (in No. 50 sometimes shading to purple).

48. *Echinocactus sileri* Engelm. MSS.

Globose; ribs 13, prominent, densely crowded, with short rhombic-angled tubercles; radial spines 11 to 13, white; central 3, black with pale base, 18 mm. long, the upper one slightly longer; flowers scarcely 2.5 cm. long, straw-colored; fruit unknown.—Type, Siler of 1883 in Herb. Mo. Bot. Gard.

Cottonwood Springs and Pipe Springs, southern Utah.

Specimens examined: UTAH (A. L. Siler of 1883).

The description given by Britton and Rose in The Cactaceae, Vol. III, p. 215, is:

28. *Utahia* gen. nov.

A small globose cactus, prominently ribbed, the ribs tubercled, the areoles felted and bearing several subulate spines; flowers small, nearly rotate, yellow, borne at the areoles of the upper part of the plant; ovary and perianth-tube densely covered with dry imbricated fimbriate-lacerate scales; perianth-segments short, narrow.

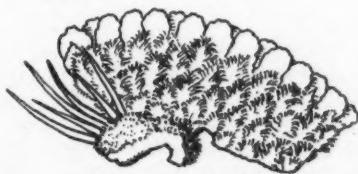


FIG. 225.

FIG. 225.—Flower of *Utahia sileri*. x 1.5.

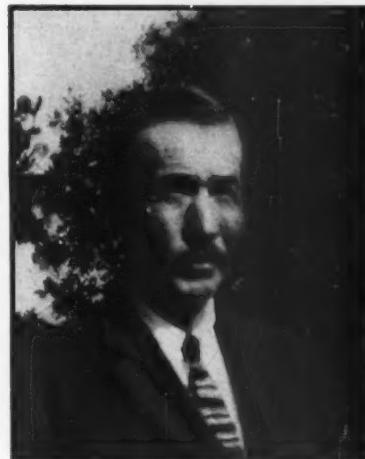
FIG. 227.—Spine-cluster of *Utahia sileri*. Natural size. (Position of the flower has been added to the illustration from Britton and Rose).



FIG. 226.

FIG. 226.—Flower-scale of *Utahia sileri*. x 6.

FIG. 227.—Position of the flower has been added to the illustration from Britton and Rose.



Hinton Siler, son of A. L. Siler, for whom the plant was named.

Type species: *Echinocactus sileri* Engelmann.

Named with reference to its type locality in the state of Utah. A monotypic genus.

*Utahia sileri* (Engelmann) B & R.

Globose, 10 cm. in diameter; ribs 13 to 16, prominent, densely crowded, with short rhombic-angled tubercles; radial spines 11 to 15, stiff, white; central spines 3 or 4, black with pale base, most of them curved upward, 18 mm. long, the upper one slightly longer, the lower ones sometimes stouter and porrect; flowers scarcely 2.5 cm. long; fruit unknown.

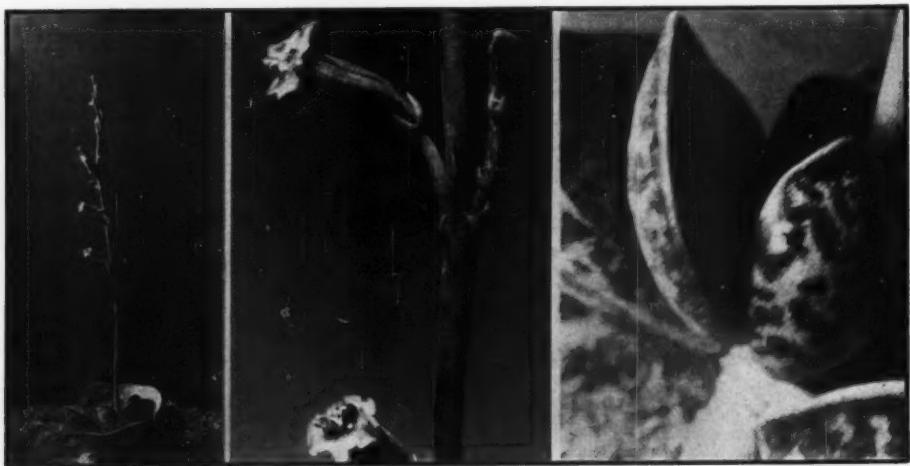
Type locality: Cottonwood Springs and Pipe Springs, southern Utah.

Distribution: Southern Utah.

The plants collected by young Mr. Wright and by Mr. Kapp agree with the descriptions of Schumann and of Britton and Rose in every respect. The fact that the flower is borne at the areole may be considered an important and differentiating characteristic of the plant and convincing proof of its identification. The plants were rediscovered in the exact region of the type locality given by the descriptions.



FIG. 227.



*Adromischus maculatus*. LEFT—Flowering plant in collection of A. Burns, San Rafael. CENTER—Part of flower-stem x 2. RIGHT—Part of Rosette x 2.5. Photos by West.

## *Adromischus maculatus (Salm) Lem.*

By JAMES WEST

Among the most interesting plants to flower this season for the first time in this region, as far as we know, was a specimen of this rare species, in the possession of our friend Archibald Burns of San Rafael. Originally it was one of the choice items in the collection of the late Charles Abraham. Whether it was grown by him from seed or imported, we have not been able to ascertain\*. It is probably the mother plant of most or all of the few specimens to be found in California collections.

The genus *Adromischus* (from the Greek *hadros*—stout, thick, and *mischos*—stem) was established by Lemaire in 1852 as a segregate from *Cotyledon*, and is upheld by Berger in his recent treatment of the family in *Natürliche Pflanzenfamilien*. It is distinguished from the former principally by its flowers, small, tubular, erect, almost sessile in a spike-like terminal raceme on a stout stem furnished with small bracts, in contrast to the larger, nodding flowers of *Cotyledon*, crowded in a cymose panicle at the tip of naked stems.

The individual flowers have lobes sharply reflexed rather than recurved, thread-like filaments with globose anthers, the 10 stamens being of unequal length, the five epipetalous ones shorter. In *Cotyledon* the filaments are stout, their large oblong anthers all in one plane. The female organs likewise differ in that

our genus has slender carpels insensibly merging into short, straight subulate styles, while in *Cotyledon* the ovary is short and rounded, ending in long recurved styles. (See diagram.)

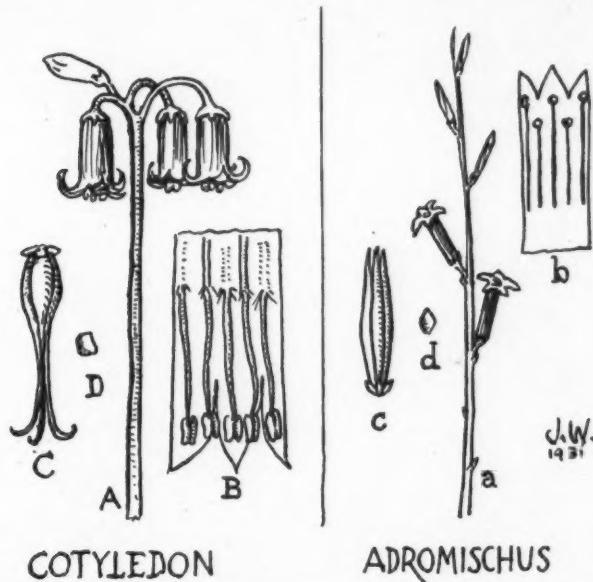
*Adromischus maculatus*, like its congeners from South Africa, is a very distinct and handsome little plant, with its thick, nearly orbicular leaves heavily blotched in dark red-purple on a grey-green ground. They are few, disposed in rosettes on very short, sometimes branching stems. The plant is increased from stem- or leaf-cuttings, which root quite readily, the leaves being easily detached. It would doubtless be more common, were it not for its elephantine slowness of growth and a consequent scarcity of material for cuttings.

Considering their attractive habit, very few of the score or more of species of *Adromischus* are in cultivation with us. The commonest is *A. clavifolius* (Haw.) Lem., perhaps better known as *A. Van der Heydeni* Hort. It seems to have been first introduced to cultivation in California by our friend Beecroft of Escondido, California, who imported it from Europe along with many another rarity. It forms dense clusters of small, thick ovate-lanceolate or spatulate olive-green leaves indistinctly spotted. *A. cristatus* (Haw.) Lem. was shown by Frank Weinberg in the recent San Francisco Cactus Show, where it won first prize for rarest succulent. This peculiar plant has, in contrast to the former, petioled leaves, very thick and turgid, the truncate apex

\*E. A. had this originally from Mr. Ed. Mendel. E. W.

of the leaf being strongly frilled (undulate-dentate). In age this species forms an appreciable stem thickly set with short aerial roots, giving the plant, to judge from the illustration in Berger's Crassulaceae (fig. 199) a most singular appearance. Finally, our collections include the likewise rare *A. cooperi* (Bak.) Berg., with longer, narrower and flatter leaves than any of the foregoing, dark green obscurely blotched with brownish-red, the tips being truncate and more or less wavy-crenulate. Several other species have since the writing of this been added to our collections, notably by the Sodenia Gardens of Pasadena.

The species of *Adromischus* are, if we may be permitted the term, such very succulent succulents, so different in their rigid, sculptured form from ordinary plants—one is tempted to use adjectives like pachydermatous or reptilian to describe them—that it would be well worth the effort of those of our members with South African connections and import permits to introduce more of them. Among desirable species not known to be in cultivation may be mentioned: *A. bolusii* (Schonl.) Berg.; *A. hemisphericus* (L.) Lem.; *A. montium klinghardtii* (Dint.) Berg.; *A. marlothii* (Schonl.) Berg., and *A. mammillaris* (L.f.) Lem.



*Flowers of Cotyledon and Adromischus*

A, a: Inflorescence, reduced.

B, b: Corolla, unrolled and flattened out, with stamens; appr. natural size.

C, c: Gynoecium (ovary and styles) with subtended scales; appr. natural size.

D, d: Scale, enlarged.

### THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

*An International Society for all lovers of Xerophytes*

Headquarters: LOS ANGELES, CALIFORNIA

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**IMPORTANT NOTE:** Plant names are printed as received from the advertiser. The Journal does not change the spelling in any way.

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#### BOOKS AND LITERATURE

**CACTUS JOURNAL**, Vol. I and Vol. II, are now for sale. Within the year, these first two volumes will not be obtainable. It is believed that the Cactus Journal will eventually be as valuable as Blanc's catalogue. One should take advantage of the original price of \$6 per volume.



By MARY NORWOOD LAWRENCE

Assistant Editor

376 N. Ave. 57, Los Angeles, Calif.

That blessed Old Lady of the Flowers, Kate O. Sessions, is back in her gardens once more after a long, serious illness. Not only San Diego but the Horticultural world at large breathes easier. Down through a half century of landscape work one can trace the "fine Italian hand" of Kate Sessions in the great gardens of Southern California, from Coronado to Santa Barbara. Born in San Francisco and educated in Oakland and at Berkeley, the various trips to Hawaii and its tropical growth in her youth so interested her that when she came South to visit she remained, intrigued by its mild climate and promising soil.

Balboa Park, on the northwestern 10 acres of which she was located for 12 years, instrumental in its development and furnishing trees and shrubs to the streets and school grounds of San Diego, is an evergreen monument to her and to her civic activities. That an Aloe and Agave Garden is to be built in the Park and dedicated to her is but a fitting tribute to her floral foresight.

Coronado was her first love, and most of the lovely green old familiaris growing there, bow in tribute as she passes. Now the upbuilding of Mt. Soledad on the highest point of which she has her home and gardens, engages her lively interest. May that active mind remain long among us to spur us on and direct our horticultural endeavors.

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One of the Society's charter members, keen till recently in all its activities, celebrated his 75th birthday anniversary on a pleasant October Sunday. Half a hundred officers and members "surprised" Colonel Kewen by a visit to his picturesque garden high up in the hills of South Pasadena. Few cactus men in or out of the profession have done as much to familiarize amateurs with the name and habits of the fascinating succulents; to graft and to grow them; to make the sick ones well and to force the healthy ones ahead as has Perrie Kewen. His experiments in soils and enriching solutions are a matter of record.

For all of which the writer can vouch. Some of her most precious holdings were headed for the garbage pail or incinerator when rescued by the Colonel and by some uncanny hocus-pocus were restored to well-being.

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An informal meeting of "Our Society" was held under the glorious oaks surrounding the Museum of Natural History in Santa Barbara recently. Ralph Hoffman as Curator and host and E. O. Orpet related a few personal anecdotes as a preface to a round of inspection of some of the many famous gardens for which this city is noted.

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E. Parlin Estes is the proud possessor of 67 varieties of Euphorbia; undoubtedly the greatest number in any one collection in or around the San Francisco Bay district.

